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P.O. Box 270829
San Diego, CA 92198-2829

EXAMINER

SAN JUAN, MARTINJERIKO P

ART UNIT	PAPER NUMBER
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2132

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/759,895	Applicant(s) EDEN ET AL.	
	Examiner Martin Jeriko P. San Juan	Art Unit 2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13-27, 30, 31 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13-27, 30, 31 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a response to Applicant's Amendments and Remarks filed on September 27, 2007. Claims 1-34 were pending. Claims 1-5, 13-20, 27, 30-31, and 34 have been amended. Claims 11-12, 28-29, and 32-33 have been cancelled. Claims 1-10, 13-27, 30-31, and 34 are currently pending.

Response to Arguments

1. Applicant's arguments filed on September 27, 2007 have been fully considered but they are not persuasive.

Applicant respectfully submits that a prima facie case of obviousness has not been supported in the rejections. With regard to the Applicant's invention, the Applicant argues that the amended claims limit a user to a particular resource corresponding to a particular key. This means that each printer resource is associated with a particular key (K), so that a print job can be sent with information unlock just one specific printer resource. The combination of references fails to disclose a secure means of delivering a combination of encrypted hash and encrypted encryption key that limits access to just one particular resource, for one particular print job. Therefore, the combination for

references does not teach every limitation associated with claims 1, 17, 18, and 34.

The Examiner respectfully disagrees by asserting that a prima facie case of obviousness has been established. The rejections under 35 USC 103(a) under Morgan et al. [US 5220674], Wiegley [US 6711677], and Konsella et al. [US 6856317] are being maintained while incorporating the amended claims and further explanation behind the rejections. Most or all suggestions/motivations are in the references themselves. There is a reasonable expectation of success because it has been explained clearly how a person ordinary skill in the art at the time of invention would have combined these references. And even though the individual reference themselves may not teach all the claim limitations, the references when combined as shown and explained do teach or suggest all the claim limitations. Refer to the claim rejections explained in section of Claim Rejection under 35 USC 103.

Applicant further argues that Wiegley discloses a two-way communication process where link security is established in response to sending a session identifier to the node originating the print job, receiving a session identifier back in a reply, and comparing the received session identifier with the originally-sent identifier. In contrast, the claimed invention uses a one-way link between nodes – the claimed invention first device does not send a session identifier. Another

general difference is that Wiegley's process is designed to protect a print job being transmitted from one node to another. The claimed invention is designed to securely access a resource that is already stored in the memory of the destination node. Further Wiegley does not disclose the processing of the print job using the decrypted resource. And with regard to Konsella, Konsella does not disclose a secure means of transmitting or delivering a decryption key to a printer. Konsella does not even disclose a means of associating encryption keys with particular secured resources.

Examiner respectfully reminds the Applicant that while the individual reference themselves may not teach all the claim limitations, the references when combined as shown and explained do teach or suggest all the claim limitations. Refer to the rejections and explanations in section of Claim Rejection under 35 USC 103. With regard to "Konsella not disclosing a means of associating encryption keys with particular secured resources," the Examiner respectfully disagrees and points that it would have been inherent because of the evidence that encryption/decryption keys exist for particular resources as cited in the in the section of Claim Rejection under 35 USC 103.

Claim Objections

1. Claim 10 is objected to because of the following informalities:

a. It appears that claim 10 should have been amended to incorporate the amendments of claim 1. Though it appears it has been amended, it has not been declared. For the purpose of examination, the Examiner is still maintaining the previous rejection because the subject matter being claimed would have been the same as the previous one.

Appropriate correction is required.

2. Claims 13-14 and 16 objected to because of the following informalities:

b. N_i must be corrected to N_k , since N_i is not defined.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan et al. [US PN 5220674], and further in view of Wiegley [US PN 6711677 B1] and Konsella et al. [US PN 6856317 B2].

Regarding Claim 1, Morgan et al. teaches a method for network-connected resources, the method comprising: at a first network-connected node, receiving an unencrypted electronically formatted job [US PN 5220674, Col 6, Ln 55-58], receiving a selection command for a particular one of a plurality of resources [US 5220674, Col 4, Ln 13-21 – Examiner notes that it is inherent that a selection command for a particular one of a plurality of resources is received from a particular printing request if the resource manager has knowledge for supplying the needed resource from the plurality of resources stored as evidenced by the cited passage.] and using a resource to process the job [US PN 5220674, Col 7, Ln 24-29].

Morgan et al. does not teach receiving CK, a symmetrical encryption key (K) encrypted using an asymmetrical encryption public key (pubK); receiving CH, a hash (H) of the job, further encrypted using K; decrypting CK using an asymmetrical encryption private key (privK), corresponding to pubK, to recover K; hashing the job, generating H'; using K to validate CH.

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Weigley teaches a secure printing method comprising: receiving CK [session key – US PN 6711677 B1, Col 4, Ln 49], a symmetrical encryption key (K) encrypted using an asymmetrical encryption public key (pubK) [encrypted session key with printer public key – US PN 6711677 B1, Col 4, Ln 54]; receiving CH, a hash (H) of the job, further encrypted using K [compute hash value for print data, encrypt hash value using session key – US PN 6711677 B1, Col 5, Ln 32]; decrypting CK using an asymmetrical encryption private key (privK), corresponding to pubK, to recover K [printer decrypts session key using its private key – US PN 6711677 B1, Col 5, Ln 4]; hashing the job, generating H' [printer computes hash value of print data -- US PN 6711677 B1, Col 5, Ln 36]; using K to validate CH [US PN 6711677 B1, Col 5, Ln 36-39];

It would have been obvious to one of ordinary skill in the art at the time of invention to add cryptographic security as taught by Weigley in the method of using network-connected resources of Morgan et al. because there is no security precautions in the method of Morgan et al. The suggestion/motivation for combining would have been to provide security to the access and use of network-connected resources by validating the print job [US PN 6711677 B1, Col 2, Ln 35-53] that would essentially access and use the resource. Morgan et al. and Weigley are analogous art because they are both in the same field of endeavor involving printing systems. Therefore, it would have been obvious to combine the inventions of Morgan et al. and Weigley.

Konsella et al. teaches a system and method for storing public and secure font data in a font file which is a form of printing resources comprising: receiving a selection command for a particular one of a plurality of resources [US 6856317 B2, Col 5, Ln 3-15]; in response to a validation of use, decrypting an encrypted resource using a decryption key [US PN 6856317 B2, Col 4, Ln 44-56]; and also providing a particular decryption key corresponds to a particular encrypted resource [US 6856317 B2, Col 5, Ln 11] [US 6856317 B2, Col 6, Ln 17-20].

It would have been obvious to one of ordinary skill in the art at the time of invention to add cryptographic security as taught by Konsella et al. in the actual use of network-connected resources of Morgan et al. because these secure font files can be stored easily in the printer server's internal collection of resources. The suggestion/motivation for combining would have been to provide security to the use of network-connected resources such as fonts and glyphs [US PN 6856317 B2, Col 2, Ln 1-50] and for ease of maintaining these secured resources [US PN 6856317 B2, Col 5, Ln 30-40]. Morgan et al. and Konsella et al. are analogous art because they are both in the same field of endeavor involving printing systems that also solves the problem of security. Therefore it would have been obvious to combine the inventions of Morgan et al. and Konsella et al.

Since both Morgan and Konsella teach receiving a selection command for a particular one of a plurality of resources, and Konsella alone teaches providing a particular

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decryption key that corresponds to a particular encrypted resource [US 6856317 B2, Col 6, Ln 17-20], it follows that Morgan combined with Konsella would suggest that a particular printing request would comprise a particular decryption key corresponding to a particular encrypted resource such that it would have been taught wherein receiving a selection command for a particular one of a plurality of encrypted resources includes receiving K'_i , where $1 \leq i \leq m$, where K'_i is the decryption key taught by Konsella [US 6856317 B2, Col 5, Ln 11]. Also, the fact that decryption and encryption keys are used interchangeably by Konsella [US 6856317 B2, Col 5, Ln 6-12] to enable the encrypted printer resource would have suggested that such a cryptographic key would have been a symmetrical key.

However, Morgan and Konsella by themselves do not teach K'_i being encrypted using an asymmetrical encryption public key (pubK). As such, the combined invention of Morgan and Konsella do not teach wherein receiving a selection command for a particular one of a plurality of encrypted resources includes receiving CK_i , where $1 \leq i \leq m$; and wherein decrypting the selected resource in response to the encrypted resource selection command includes decrypting CK_i to recover one of symmetrical encryption keys K_1 through K_m , where K_1 through K_m correspond to encrypted resources CR_1 through CR_m .

Weigley teaches that it is common and well known in the art to provide security in the exchange of a key between two nodes in a network known as dual key systems [US PN

6711677 B1, Col 1, Ln 19-26]. As such, Weigley uses the dual key systems to teach receiving a cryptographic key CK [session key – US PN 6711677 B1, Col 4, Ln 49], which is a symmetrical encryption key (K) encrypted using an asymmetrical encryption public key (pubK) [encrypted session key with printer public key – US PN 6711677 B1, Col 4, Ln 54]; decrypting a cryptographic key CK, using an asymmetrical encryption private key (privK), corresponding to pubK, to recover K [printer decrypts session key using its private key – US PN 6711677 B1, Col 5, Ln 4].

The invention of Morgan and Konsella combined with Weigley would have taught that K_i^r of Konsella be encrypted using an asymmetrical encryption public key such that receiving a selection command for a particular one of a plurality of encrypted resources includes receiving CK_i^r , where $1 \leq i \leq m$.

Furthermore, the invention of Morgan and Konsella combined with Weigley would have taught that K_i^r of Konsella be encrypted using an asymmetrical encryption public key such that decrypting the selected resource in response to the encrypted resource selection command includes decrypting CK_i^r to recover one of symmetrical encryption keys K_1^r through K_m^r , where K_1^r through K_m^r correspond to encrypted resources CR_1 through CR_m .

Also it would have been obvious to one of ordinary skill in the art at the time of invention to use Konsella's symmetric key of protecting the printer resource to be directly related

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to the key data of Weigley's symmetrical key of protecting the transmission of the print job because the print job being requested is directly tied to the needed printer resource as taught by Morgan [US 5220674, Col 4, Ln 13-21] such that combining Morgan, Wiegley, and Konsella would have taught CK'_i to be CK_i .

The suggestion/motivation for combining all three references would have been to provide security of a confidential print job [US 6711677 B1, Col 1, Ln 50-57]. Since a print job is tied directly to the access of a network connected printer resource, it follows another suggestion/motivation for combining which is to provide security to the access and use of a network-connected resources by validating the print job [US PN 6711677 B1, Col 2, Ln 35-53] that would essentially access and use the resource. Providing security to the actual use of the network-connected resources such as fonts and glyphs [US PN 6856317 B2, Col 2, Ln 1-50] and for the ease of maintaining these secured resources [US PN 6856317 B2, Col 5, Ln 30-40] are another suggestion/motivation for the references to be combined. Lastly, providing security in the transmission/exchange of cryptographic keys is already known in the art as dual keys systems [US PN 6711677 B1, Col 1, Ln 19-26] which would have been another suggestion/motivation to combine.

Morgan, Wiegley, and Konsella are analogous art because they are all in the same field of endeavor involving printing systems. Each reference also solves each other's problems/deficiencies concerning security issues as explained in the above

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suggestions/motivations. Therefore, it would have been obvious to combine Morgan, Wiegley, and Konsella.

Regarding claim 2, the combined inventions of Morgan et al., Wiegley, and Konsella et al. teaches the method of claim 1 using K_i to validate CH_i as follows:

encrypting H' using K_i , obtaining CH_i' ; and, matching CH_i to CH_i' [US PN 6711677 B1, Col 5, Ln 36-39 -- This method claim is an obvious variant of claim 3. H is inherent in CH using the symmetrical key, K .].

Regarding claim 3, the combined inventions of Morgan et al., Wiegley, and Konsella et al. teaches the method of claim 1 using K_i to validate CH_i as follows: decrypting CH_i using K_i , generating H ; and, comparing H to H' [US PN 6711677 B1, Col 5, Ln 36-39].

Regarding claim 4, the combined inventions of Morgan et al., Wiegley, and Konsella et al. teaches the method of claim 1 further comprising: prior to receiving the job, CK_i , and CH_i , receiving the encrypted resource; and storing the encrypted resource [US 6856317 B2, Col 5, Ln 36].

Regarding claim 5, the combined inventions of Morgan et al., Wiegley, and Konsella et al. teaches the method of claim 4 further comprising: installing $pubK$ and $privK$ upon initialization [US PN 6711677 B1, Col 4, Ln 31-34].

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Regarding claim 6, the combined inventions of Morgan et al., Wiegley, and Konsella et al. teaches the method of claim 1 wherein receiving the unencrypted electronically formatted job includes receiving a print job in a format selected from the group including text and image formats [US PN 5220674, Col 6, Ln 58-61].

Regarding claim 7, the combined inventions of Morgan et al., Wiegley, and Konsella et al. teaches the method of claim 4 wherein storing the encrypted resource includes storing an encrypted font resource [US PN 6856317 B2, Col 5, Ln 32-36]; and wherein using the decrypted resource to process the job includes printing a print job using the decrypted fonts [US PN 6856317 B2, Col 5, Ln 5-6].

Regarding claim 8, the combined inventions of Morgan et al., Wiegley, and Konsella et al. teaches the method of claim 7 wherein storing the encrypted font resource includes storing resources selected from the group including a logo, personal signature image, and glyph [US PN 6856317 B2, Col 2, Ln 54-62].

Regarding claim 9, the combined inventions of Morgan et al., Wiegley, and Konsella et al. teaches the method of claim 4 wherein receiving the encrypted resource includes receiving the encrypted resource in a format selected from the group including hypertext transport protocol (http) and file transport protocol (FTP) [US PN 6856317 B2, Col 5, Ln 30-40 -- Konsella et al. teaches distributing secure font data files including emailing to recipients which implies an internet network connection. HTTP and FTP are standard

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internet protocols for communicating data in the internet, as such, these protocols are inherent.].

Regarding claim 10, the combined inventions of Morgan et al., Wiegley, and Konsella et al. teaches the method of claim 1 further comprising: at a second network-connected node, generating the job [US PN 5220674, Col 6, Ln 55-58]; encrypting K with pubK, generating CK [encrypted session key with printer public key – US PN 6711677 B1, Col 4, Ln 54]; hashing the job, generating H [US PN 6711677 B1, Col 5, Ln 32]; encrypting H using K, generating CH [US PN 6711677 B1, Col 5, Ln 32]; and, sending the job, CK, and CH to the first node for job processing [US PN 6711677 B1, Col 5, Ln 32-34].

Regarding claim 13, the combined inventions of Morgan, Wiegley, and Konsella teaches the method of claim 1 wherein receiving the unencrypted electronically formatted job includes receiving the job at network-connected node N_k , where $1 \leq k \leq n$; wherein receiving CK includes N_i receiving CK_{ik} , where CK_{ik} is generated by encrypting K_i using corresponding asymmetrical encryption public key $pubK_k$; and, wherein decrypting CK includes N_i decrypting CK_{ik} using corresponding asymmetrical encryption private key $privK_k$, to recover K_i . [This is rejected based on obviousness directed on implementing a plurality of the combined invention of Morgan, Wiegley, and Konsella of claim 1.]

Regarding claim 14, the combined inventions of Morgan, Wiegley, and Konsella teaches the method of claim 1 wherein receiving the unencrypted electronically formatted job

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includes receiving the job at network-connected node N_k , where $1 \leq k \leq n$; wherein receiving CK includes N_i receiving CK_{ik} , corresponding to symmetrical encryption key K_{ik} , encrypted using $pubK_k$; wherein receiving CH includes N_i receiving CH_{ik} , a hash of the job encrypted using corresponding symmetrical encryption key K_{ik} ; and wherein decrypting CK includes N_i decrypting CK_{ik} using asymmetrical encryption private key $privK_{ik}$, to recover corresponding symmetrical encryption key K_{ik} . [This is rejected based on obviousness directed on implementing a plurality of the combined invention of Morgan, Wiegley, and Konsella of claim 1.]

Claim 15 has the same limitations as claim 2 with the accommodation of the plurality of the invention in claim 1. Claim 15 is rejected based on obviousness and using the same references and rationale of claim 2.

Claim 16 has the same limitations as claim 3 with the accommodation of the plurality of the invention in claim 1. Claim 16 is rejected based on obviousness and using the same references and rationale of claim 3.

Claim 17 is rejected because it is still directed to the same invention of claim 1.

Claim 18 is rejected using the same references as claim 1. Claim 18 is merely a system performing the methods of claim 1.

Claims 19-27 and 30-31 are rejected using the same references and rationale claims 2-10, and 13-14 respectively because it is the system performing the methods of claims 2-10, and 13-14.

Claim 34 is rejected using the same reference and rationale as claim 17 which is still directed to the same invention of claim 1.

Conclusion

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Jeriko P. San Juan whose telephone number is 571-272-7875. The examiner can normally be reached on M-F 8:30a - 6:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Also, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

/MJSJ/

Martin Jeriko San Juan
Examiner. Art Unit 2132


GILBERTO BARRON JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100